

<u>Band</u>	<u>Position</u>	<u>Education/Experience</u>	<u>Technology</u>	<u>Duties</u>	<u>Aptitude Criteria to Qualify for Position</u>	<u>Behavior Criteria to Achieve in Current Job; Required To Advance</u>	<u>Recommended Training for Current Job; Knowledge Required To Advance</u>
5	Programmer	BA/BS in Computer Information Systems or Computer Science OR AS in CIS/CS plus 1 year of programming experience OR BA/BS in a non-related field plus 1 year of programming experience OR AS degree in non-related field plus 3 years of programming experience OR 5 years of programming experience	Knowledge of computer programming methodologies	Using accepted principles of Computer Science, writes, updates, and maintains computer programs or software packages to handle a variety of tasks such as tracking inventory, storing or retrieving data, or controlling other equipment.	Strong technical programming aptitude (test)	Communication Skills (Written and Verbal)	Technical training as needed (languages, tools, etc)
			Prefer working knowledge with Oracle, Java, and/or .Net	Applies accepted testing methods from the discipline of Computer Science to identify critical test points for particular computer programs. Designs testing processes to thoroughly evaluate all of the reasonably identifiable variations in data, input, and output.	Working knowledge of PC's and operating systems	Self Motivated	New MDT employee orientation, New User Orientation
				Carefully identifies the source or sources for all errors discovered during the testing process. Notes the implications of complex interactions between multiple procedures, routines, or other sections of code on the error identification and corrections process.	No Active Personnel Problems, Positive Performance Reviews over the last two years	Ability to think logically, be creative and use imagination	MDT Application Development and SDLC Standards, Program-It
				Conducts trial runs of programs and software applications to be sure they will produce the desired information and that the instructions are correct.		Proven Problem Solver	MS Office Skills (Word, Excel, Outlook)
				Based on accepted practices in Computer Science, compiles and writes documentation of program development and subsequent revisions, inserting comments in the coded instructions so others can understand the program as well as completing identified documents per MDT standards.		Ability to learn and apply new application programming languages quickly	Keyboarding (Typing)
				Consults with managerial and technical personnel to clarify program intent, discusses programming complexities or new methods required, and proposes solutions including platforms, languages, interfaces, tools, and methods.		Reading Comprehension	Listening Skills
				Performs or recommends revision, repair, or expansion of existing computer programs to increase operating efficiency or adapt to new requirements. Carefully evaluates the interdependencies between the program to be modified and any other existing programs, database interfaces, re-usable code modules, department business practices, and user interactions.		Ability to Plan, Organize, Gather and Conduct Research as appropriate for assignments	Technical Writing (User Documentation, Program Documentation, Testing Documentation)
				Applies the principles of Computer Science to create workflow charts and other relevant diagrams to detail program flow, logic, input and output requirements, and interfaces.		Service Oriented	Creative Problem Solving
				Writes or contributes to instructions or manuals to guide end users.		Active Listening	Unit and System Testing Methodologies
				Learns and uses the MDT Application Development Process		Ability to Identify Problems	
				Learns and uses the MDT programming standards		Quality, Accuracy and Attention to Detail	
				Provides status reports/regular updates to supervisor and project lead		Ability to Take Direction	
				Seeks help when has questions or concerns			
				Actively interacts with other IS Personnel			

<u>Band</u>	<u>Position</u>	<u>Education/Experience</u>	<u>Technology</u>	<u>Duties</u>	<u>Aptitude Criteria to Qualify for Position</u>	<u>Behavior Criteria to Achieve in Current Job; Required To Advance</u>	<u>Recommended Training for Current Job; Knowledge Required To Advance</u>
6	Programmer	BA/BS in Computer Information Systems or Computer Science plus 1 year of programming experience OR AS in CIS/CS plus 3 years of programming experience OR BA/BS in a non-related field plus 3 year of programming experience OR AS degree in non-related field plus 5 years of programming experience OR 7 years of programming experience	Preferred MDT programming languages	All band 5 Programmer duties + the following:	All Band 5 Programmer aptitude criteria + the following:	All Band 5 Programmer behavior criteria + the following:	Systems Analysis & Design and other Programming Development Training
			Prefer working knowledge with Oracle, Java, and/or .Net	Understands and applies the principles of Systems Analysis and Design at the application level to improve the completion of a variety of existing business tasks within the department. Scope will be directed toward less complex applications.	Experience that clearly demonstrates execution of Band 5 Programmer duties as defined above.	Works independently with little supervision on assigned tasks	Technical training as needed (languages, tools, etc)
				Actively participates as a team member in both the analysis and development phases of program development assignments within the division and department. Develops or assists in the development of solutions to create programs that effectively and efficiently mirror or improve existing business systems.	Demonstrated responsiveness/follow-through activities	Prioritizes workload and multi-tasks to Supervisor's satisfaction	Requirements Definition
				Carefully examines the multiplicity of connections between systems, computer programs, existing databases, and current processing techniques to avoid potentially harmful side effects when adding new processes or updating existing ones.	Able to produce quality and efficient code requiring little modification during testing processes.	Proactively seeks ways to grow and expand technical skills	Refresher on MDT Application Development and SDLC Standards, Program-It
				Using the accepted methods of Systems Analysis and Design, analyzes complex programming tasks. Identifies and resolves ambiguities in those tasks or business requirements to facilitate programming decisions. Creates appropriate models and documentation to support and explain the results of all analysis tasks.	Able to produce appropriate documentation with little correction and in a timely manner	Analytical Thinking	Technical Writing (Test Plans, Interface Documentation, Scoping Documentation, Program Specification and System Documentation)
				Reviews models with project leads and technical supervisors to insure the process is understood and correctly modeled. Provides recommendations for the resolution of conflicts between divisions or work units sharing computerized systems or data.	Demonstrated proficiency with MDT SDLC		Entry level project management training (focus on estimation)
				Provides initial scoping (including level of effort, time estimates and resource needs and impacts) on projects with a single application focus for review.	Consistently meets deadlines		Further MS Office training (Power Point)
				Develops program specs for review			Process and Data Modeling
				Becomes secondary contact for certain applications (matrix), and primary on small or isolated systems			Managing Multiple Priorities
				Assists with training activities for users.			Basic Leadership/Team Building training

<u>Band</u>	<u>Position</u>	<u>Education/Experience</u>	<u>Technology</u>	<u>Duties</u>	<u>Aptitude Criteria to Qualify for Position</u>	<u>Behavior Criteria to Achieve in Current Job; Required To Advance</u>	<u>Recommended Training for Current Job; Knowledge Required To Advance</u>
6	Computer Systems Analyst	BA/BS in Computer Information Systems or Computer Science and 4 years programming and analysis experience OR AS in CIS/CS plus 6 years of programming and analysis experience OR BA/BS in a non-related field plus 6 years of programming and analysis experience OR AS degree in non-related field plus 8 years of programming and analysis experience OR 10 years of programming and analysis experience	Preferred MDT programming languages	All band 6 Programmer duties + the following:	All Band 6 Programmer aptitude criteria + the following:	All Band 6 Programmer behavior criteria + the following:	Project Management Training (includes tools) with focus on small projects and more on estimation, triple constraints, etc.
			Elementary database design activities (logical and physical design)	Understands and applies the principles of Systems Analysis and Design (e.g, logical and physical database design, produces design documents from analysis documentation) at the application level and system level to improve the completion of a variety of existing business tasks within the department. Scope will be directed toward existing applications and systems.	Experience that clearly demonstrates execution of Band 6 Programmer duties as defined above.	Must be able to effectively communicate with higher level staff and management.	Logical and physical database training including detailed data modeling
			Prefer working knowledge with Oracle, Java, and/or .Net	Performs data and/or application conversions	Proficient in all programming languages needed to support assigned business areas	Ability to provide limited work direction to others	Technical training as needed (languages, tools, etc)
			Prefer understanding of spatial components	Works with Interfaces	Able to develop clear and accurate programming analysis documentation and programming specs with little alterations required	Results Oriented	Training on Managing Teams
				Leads small project efforts	Provides accurate and complete scoping documents for a single application project.	Decision Maker	User Requirements Training (more in depth)
				Delivers training for staff and users	Delivers programming specifications at appropriate level of detail to ensure efficient programming was accomplished.	Networking (individuals and teams)	Mentoring
				Provides scoping and manages scope changes appropriately (including level of effort, time estimates and resource needs and impacts) on projects within an application group or division.	Provides rudimentary level of support successfully for applications assigned to as back-up.	Requirements identification (ability to ask the right questions and use observation techniques to draw out requirements from the business user).	Negotiating including Conflict Resolution
				Develops testing documentation to include unit and system testing as well as user acceptance and regression testing.	Detail oriented	Ability to talk in non-technical terms to the business user in order for them to understand what you are asking of them.	People Skills focused on effective communication
				Assists in business process analysis activities with senior staff and ensures functional specifications are documented along with the technical specifications.		Critical Thinking	How to train users/customers
				Conducts carefully prepared interviews, asking for clarification or additional information as necessary to fully understand the workings of the process to be analyzed.		Negotiation and Persuasion	Business Process Analysis -- includes process flows and documentation
				Creates appropriate models and documentation to support and explain the results of all analyzed tasks. Reviews all models with stakeholders within the project assigned to ensure the process is understood and correctly modeled.		Positive Relationship Building	Presentation Training
				Performs or directs revision, repair, or expansion of existing computer programs to increase operating efficiency or adapt to new requirements. Carefully evaluates the interdependencies between the program to be modified and any other existing programs, database interfaces, re-usable code modules, department business practices, and user interactions.		Increased role in primary and secondary applications support matrix	Refresher on MDT Application Development and SDLC Standards, Program-It and any recognized technical writing reviews needed
				Produces solid unit and systems testing documentation.			Technical Writing (Requirements Documentation and Project Charters)
				Performs successful unit and system testing processes.			User Acceptance & Regression Testing Methodologies
				Performs issue resolution and escalation			
				Ensures testing matches the "Traceability Matrix" for own projects and those providing QA services to.			
				Becomes primary contact for certain applications (matrix) and retains back-up responsibilities on others.			

<u>Band</u>	<u>Position</u>	<u>Education/Experience</u>	<u>Technology</u>	<u>Duties</u>	<u>Aptitude Criteria to Qualify for Position</u>	<u>Behavior Criteria to Achieve in Current Job; Required To Advance</u>	<u>Recommended Training for Current Job; Knowledge Required To Advance</u>
7 Level 1	Computer Systems Analyst	BA/BS in Computer Information Systems or Computer Science and 6 years programming and analysis experience OR AS in CIS/CS plus 8 years of programming and analysis experience OR BA/BS in a non-related field plus 8 years of programming and analysis experience OR AS degree in non-related field plus 10 years of programming and analysis experience OR 12 years of programming and analysis experience	Preferred proficient with MDT programming languages and applications	All band 6 Computer Systems Analyst duties + the following:	All Band 6 Computer Systems Analyst aptitude criteria + the following:	All Band 6 Computer Systems Analyst behavior criteria + the following:	Presentation Training
		1-3 years of Project Management	Significant database design activities (logical and physical design)	Mentors and provides guidance and technical support for band 5 and 6 staff	Experience that clearly demonstrates execution of Band 6 Computer Systems Analyst duties as defined above.	Delivered on time critical business applications, systems and/or projects	Quality Assurance
		1-3 years of Leading Teams/Projects	Expect working knowledge with Oracle, Java, and/or .Net	Understands and applies the principles of Systems Analysis and Design at the application level and system level to improve the completion of a variety of existing business tasks within the department. Scope will be directed toward existing and new applications and systems.	Successful user acceptance testing results	Works closely with Database Administration staff on Systems/Operations Team	Business Process Analysis
		1-3 Years of Database Schema Development Experience	Expect understanding of spatial components	Ensures business requirements are appropriately gathered and translated into confirmed functional requirements prior to any technical requirements being completed.	Able to develop complete and accurate functional specifications for small projects	Influence and Persuasion	Influencing
		Prefer 3-5 years of analysis and programming experience with MDT applications		Presents designs, including prototypes to clients and stakeholders for own projects and those providing QA services to.	Possesses a strong understanding of change control	Complex Problem Solving	Change Management
		Preferred clear understanding of MDT business and application needs		Front line support for system support and on-call responsibilities	Proven technical and/or project lead on small projects	Organization Awareness	Advanced training on managing teams
				Provides regular updates to upper management on system activities		Team Building	Caliper testing to identify if interested and the aptitude exists to advance in management or higher technical ladder for future growth
				Performs complex database design (logical and physical)		Understand MDT's roles and relationships between our division and other vendors who are producing application or system solutions for other MDT business areas.	Works with HR to develop a career plan to move into management (if appropriate) - focuses on needed skill sets or behavior alterations necessary
				Provides project management skills to ensure the balance of triple constraints for own projects and those providing QA services to.			Management related training if management path (as identified above)
				Leads medium scaled, clearly defined projects; determines assignments, work methods and standards for programmers and programmer analysts assigned to the project, including creating the work breakdown structures or detailed project plan; validates all work and provides guidance where necessary.			Advanced Project Management including project tracking
				Determines system interfaces for existing systems and applications; specifically explicate the relationship between existing systems to prevent unanticipated side effects on those other systems.			Technical Writing (Work Breakdown Structure Documentation and Business Case)
				Recommends appropriate platforms for application efforts			Refresher on MDT Application Development and SDLC Standards, Program-It and any recognized technical writing reviews needed
				Fully comprehends MDT business and processes as it relates to systems and applications			Business Process Improvement Techniques
							SQL Tuning Advisor or other application/system tuning tools

<u>Band</u>	<u>Position</u>	<u>Education/Experience</u>	<u>Technology</u>	<u>Duties</u>	<u>Aptitude Criteria to Qualify for Position</u>	<u>Behavior Criteria to Achieve in Current Job</u>	<u>Recommended Training for Current Job</u>
7 Level 2	Computer Systems Analyst	BA/BS in Computer Information Systems or Computer Science and 8 years programming and analysis experience OR AS in CIS/CS plus 10 years of programming and analysis experience OR BA/BS in a non-related field plus 10 years of programming and analysis experience OR AS degree in non-related field plus 12 years of programming and analysis experience OR 14 years of programming and analysis experience	Technology Contact Person for Agency	All Band 7 Computer Systems Analyst duties +	All Band 7 Computer Systems Analyst aptitude criteria + the following:	All Band 7 Computer Systems Analyst behavior criteria + the following:	Applications system performance monitoring
		6+ Years of Analysis (SDLC)	Require proficiency with MDT programming languages and applications	Performs cross application scoping and analysis	Experience that clearly demonstrates execution of Band 7 Computer Systems Analyst duties as defined above.	Provide leadership for application and/or system performance tuning	IEEE training
		4+ years of Project Management	Require Oracle database design experience (logical & physical design)	Provides liaison services between programmers and the business community.	Proven Business Requirement Analysis experience	Initiative	Project Management Refresher
		4+ years of Leading Teams/Projects	Require working knowledge of Oracle, Java, and/or .Net	Aids in determining ISD Architecture (both apps and system operations)	Proven Team Lead (includes project management) on medium systems, applications and projects	Change Agent	Technical Writing (Policies and Procedures and White Papers)
		2+ Business Process Analysis Experience	Require understanding of spatial components	Provides technical assistance and direction to other programmers and programmer analysts to resolve problems using diagnostic tools and established methods to isolate and resolve problems.	Proven experience and knowledge with database design for medium systems, including revision and maintenance tasks.	Judgement/Decisveness	Activity Based Costing
		6+ years of Programming and Analysis experience with MDT system and applications		Act as vendor liaison as appropriate	Able to produce traceability matrices for all systems & applications, including the ability to successfully identify business, functional & technical specifications for any existing MDT application or system.	Mentoring Abilities and Experience	Consulting Skills
				Provides regular updates to upper management on critical or large system activities	Successful front line support to user and division satisfaction	Works with Systems/Operations Team	
				Monitors application system performance		Provide leadership role in ISD process improvement activities	
				Performs cross application database design analysis and review (logical and physical)		Ability to estimate change impacts in terms of triple constraints (time, \$\$, resources) & business effect	
				Leads complex and/or mission critical projects; determines assignments, work methods and standards for programmers and programmer analysts assigned to the project, including creating the work breakdown structures or detailed project plan; validates all work and provides guidance where necessary.		Provide leadership role in ISD process improvement activities	
				Determines system interfaces including existing computer systems, proposed systems, networks, and applications; specifically explicate the relationship between existing systems to prevent unanticipated side effects on those other systems.			
				Applies business process analysis techniques internal to ISD and recommends process improvements within ISD			
				Applies quality assurance and activity based costing practices			

<u>Band</u>	<u>Position</u>	<u>Education/Experience</u>	<u>Technology</u>	<u>Duties</u>	<u>Aptitude Criteria to Qualify for Position</u>	<u>Behavior Criteria to Achieve in Current Job</u>	<u>Recommended Training for Current Job</u>
8	POSSIBLE FUTURE POSITION (does not currently exist)	BA/BS in Computer Information Systems or Computer Science and 8 years programming and analysis experience OR AS in CIS/CS plus 10 years of programming and analysis experience OR BA/BS in a non-related field plus 10 years of programming and analysis experience OR AS degree in non-related field plus 12 years of programming and analysis experience OR 14 years of programming and analysis experience	All Band 7 Senior Computer Systems Analyst Technology Requirements +	All Band 7 Senior Computer Systems Analyst duties +	All Band 7 Senior Computer Systems Analyst aptitude criteria + the following:	All Band 7 Computer Systems Analyst behavior criteria + the following:	Disaster Recovery and COOP training
		6+ Years of Analysis (SDLC)	Technology Contact Person for Agency	Provides mentoring to all within ISD on areas of expertise; shares knowledge gained at technology conferences	Experience that clearly demonstrates execution of Band 7 Senior Computer Systems Analyst duties as defined above.	Strategic thinking and planning	Strategic Planning
		4+ years of Project Management	Application Technology Trend Analysis	Establishes application and technology standards for MDT for the applications team(s) and consults with others on more general technology standards	Proven Team Lead on large complex and critical systems, applications and projects. Implemented internal process improvements in order to advance ISD and the applications section.	Provide leadership role in ISD process improvement activities	Managing Contracts/Writing RFP's
		4+ years of Leading Teams/Projects	Web Development and Design Analysis	Establishes application development processes, principles and best practices for MDT including documentation requirements; plays a critical role in all related ISD Policy and Procedures development	Proven experience and knowledge with database design for large complex systems, including revision and maintenance tasks.	Technology research and analysis	Attends technology conferences for new directions as well as ideas for current technology, learns new technology and establishes training needs for MDT ISD Applications Teams
		2+ Business Process Analysis Experience	Active participant for ISD Strategic Planning	Conducts/directs business case development for various application needs to ensure cost effective alternatives.	Proven Project Management experience for large, critical and/or complex projects		
		6+ years of Programming and Analysis experience with MDT system and applications		Pursues and markets appropriate application technology solutions.			
				Keeps abreast of new developments in data and information management procedures and technologies			
				Researches and evaluates division business plans and processes to aid in establishing strategic plans for design, development and maintenance of computer systems.			
				Analyzes upgrades to current application technology and impacts of the options, provides risk analysis			
				Designs, implements and leads the development of Business Resumption planning for Disaster Recovery from the application viewpoint.			
				Proactively surveys the business community for upcoming application needs for each fiscal year. Clearly documents those needs and presents them to management, including business impacts, resource needs and budget impacts.			
				Performs R&D (Research and Development activities) on both technology and tools, completing impact analysis /cost benefit analysis as it relates to meeting strategic initiatives			
				Identifies and recommends technical training for the team; provides OJT as appropriate and works with management to suggest other opportunities			
				Is an involved member in cross-agency technical committees, interacts with other governmental representatives as appropriate			
				Critical member of the ISD Strategic Direction committee – helps define vision; identifies timelines, goals that would ensure the implementation of all approved application technology initiatives			